HEMORRHAGE REQUIRING EMBOLIZATION IN OROPHARYNGEAL CANCER: A CASE SERIES

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Introduction/Purpose Rates of Oropharyngeal Squamous Cell Carcinoma (OPSCC) are increasing nationwide in association with human papillomavirus (hpv-p16+). Radiation treatment to these tumors creates an increasing patient population at risk for head and neck necrosis and catastrophic hemorrhage. These hemorrhagic events are potentially fatal and often require salvage neurointerventional management. We aimed to assess the neurointerventional needs of patients with radiated OPSCC presenting with hemorrhage.

Materials and Methods Retrospective case series at a single tertiary care center. All patients with OPSCC who developed spontaneous hemorrhagic events between 2015 and 2020 were included.

Results Hemorrhagic presentation occurred in 33 patients, with 24 requiring subsequent embolization (2 underwent angiogram alone). 5 of the 26 patients had further hemorrhage necessitating a second embolization procedure. All patients with hemorrhage requiring embolization had undergone previous radiation to their tumor. Of the 33 patients presenting with hemorrhage, 13 had HPV-p16+ OPSCC. 11 of the 13 HPV-p16+ patients had a discrete hemorrhage source visualized on angiography, 9 requiring embolization. 5 of the patients with HPV-p16+ OPSCC rebled after initial treatment. Death occurred in 12/33 patients, 9 of whom had undergone embolization. Median time of presentation/embolization to death was 20 days (6–501 days). The pathologic vessel found on angiography deferred from that suggested on CT angiography (CTA) in 6 of the 35 treatments. CTA did not determine a bleeding vessel later localized on angiography in 2 patients. Source of hemorrhage was found in 20/26 patients angiographically. Pseudoaneurysm was seen in 11 of 26 initial interventions, and 6 rebled at least once. Coils were the most frequently used embolysate during the first presentation (n=18); used as a single embolic agent in 7 patients and in conjunction with other embolysate in 11. The lingual artery (n=3) was the most common site of repeat hemorrhage requiring embolization, followed by the ECA trunk (n=2). Of the 5 patients requiring second embolization, a source was found in 4. No angiographic lesion was found in 37.8% of all interventions. Of the 10 patients with primary ECA embolization in addition to branch embolization during initial bleed, 3 rebled and 2 died before follow-up. No patients (n=2) with primary ECA sacrifice represented with hemorrhage. Of the 9 patients with lingual artery embolization on initial presentation, 6 rebled and 5 died before follow-up. 10 patients in our study rebled after initial embolization. Of these 10 patients, 4 were initially embolized with coils, 4 with coils and n-BCA, 1 with coils and particles, and 1 with n-BCA only.

Conclusions Acute hemorrhage in the setting of radiated OPSCC can be a life threatening event. In this case series we begin to learn the morbidity and mortality associated with such events, including the relative risk of hemorrhage in patients with HPV-p16 associated OPSCC. We also begin to identify important angiographic factors and endovascular treatment measures that affect patient outcomes. Additional research is necessary to identify optimal endovascular approaches for post-hemorrhage survival in this patient population.

E-040 A RAPIDLY GROWING SYMPTOMATIC DISTAL LENTICULOSTRIATE ARTERY ANEURYSM

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We report a case of a rapidly growing small lenticulostriate aneurysm resulting in a non-hypertensive basal ganglia hemorrhage which was surgically clipped with success in a 34 year old man. Patient presented to our hospital after he became aphasic and right hemi-paretic during a strenuous exercise. His blood pressure on arrival to the hospital was within normal limits and he was ruled out for bleeding diathesis. Initial head CT showed a 4.5*3.5*3.6 cm left basal ganglia hemorrhage with a small left Sylvian cisterns subarachnoid hemorrhage. Except for the visualized basal ganglia and subarachnoid hemorrhage, initial CT angiography and brain MRI with contrast were unremarkable. Conventional angiography identified a small 1.04 mm left medial lenticulostriate side wall aneurysm. Considering rapidly improving patient exam and minimal residual deficits, securing the aneurysm with endovascular or open surgical approach was considered extremely high risk and the plan was to follow up conventional angiography in 2 months which showed a subtle